Attorney Docket No.: 2002P15679US01 Application No: 10/667,903

Page 3 of 8

## IN THE CLAIMS

1. (Original) A method of rationalizing the functioning of a fuel vapor pressure management system that is in fluid communication with a headspace of a fuel system, the fuel system supplying fuel to an internal combustion engine of a vehicle, the method comprising:

providing a fuel vapor pressure management apparatus detecting an absence of leaks with respect to the headspace;

counting a number of leak detection tests performed by the fuel vapor pressure management apparatus;

counting a number of occurrences of the fuel vapor pressure management apparatus detecting an absence of a leak; and

evaluating the number of occurrences within a selected number of tests.

2. (Currently Amended) A [[The]] method according to claim 1, wherein of rationalizing the functioning of a fuel vapor pressure management system that is in fluid communication with a headspace of a fuel system, the fuel system supplying fuel to an internal combustion engine of a vehicle, the method comprising:

providing a fuel vapor pressure management apparatus detecting an absence of leaks with respect to the headspace, the fuel vapor pressure management apparatus eemprises including:

a housing defining an interior chamber;

a pressure operable device separating the interior chamber into first and second portions, the pressure operable device including a poppet movable along an axis and a seal adapted to cooperatively engage the poppet, a first arrangement of the pressure operable device occurs during the leak detection test when there is a first negative pressure level in the first portion relative to the second portion and the seal is in a first deformed configuration, a second arrangement of the pressure operable device permits a first fluid flow from the second portion to the first portion when the seal is in a second deformed configuration, and a third arrangement of the pressure operable device permits a second fluid flow from the first portion to the second portion when the seal is in an undeformed configuration; and

Attorney Docket No.: 2002P15679US01

Application No: 10/667,903

p.6

a sensor detecting the first arrangement of the pressure operable device during the leak detection test;

counting a number of leak detection tests performed by the fuel vapor pressure management apparatus:

counting a number of occurrences of the fuel vapor pressure management apparatus detecting an absence of a leak; and

evaluating the number of occurrences within a selected number of tests.

3. (Currently Amended) A [[The]] method according to claim 1, wherein of rationalizing the functioning of a fuel vapor pressure management system that is in fluid communication with a headspace of a fuel system, the fuel system supplying fuel to an internal combustion engine of a vehicle, the method comprising:

providing a fuel vapor pressure management apparatus detecting an absence of leaks with respect to the headspace;

counting a number of leak detection tests performed by the fuel vapor pressure management apparatus;

counting a number of occurrences of the fuel vapor pressure management apparatus detecting an absence of a leak; and

evaluating the number of occurrences within a selected number of tests, the evaluating comprises including determining a statistical average of engine operating events when an absence of the leak occurs.

- (Original) The method according to claim 3, wherein the deriving the statistical average comprise empirically measuring a number the occurrences when there is the absence of the leak.
- 5. (Original) The method according to claim 3, wherein the evaluating comprises. determining a statistical average of a number of occurrences when there is the absence of the leak within a selected time period after the engine is turned off.
- 6. (Original) The method according to claim 5, wherein the selected time period is a least five minutes.

Attorney Docket No.: 2002P15879US01

Application No: 10/667,903

Page 5 of 8

7. (Original) The method according to claim 6, wherein the selected time period is at least then minutes.

- 8. (Original) The method according to claim 5, wherein the time period is selected based on the statistical average exceeding 50 percent.
- (Original) The method according to claim 1, further comprising:
  indicating a malfunction if there are none of the occurrences within the selected number
  of tests.
- 10. (Original) The method according to claim 1, wherein the selected number of tests is ten.